8) The article of claim **1**, wherein the passage holes are substantially cylindrical.

9) The article of claim **1**, wherein the wing troughs have a substantially elliptical cross-sectional shape.

10) The article of claim **9**, wherein the cross-sectional shape of the wing troughs is substantially circular or partially circular.

11) The article of claim **1**, wherein at least one coating is disposed on the outer surface; and at least a portion of each passage hole is formed through the coating.

12) The article of claim **11**, wherein the coating comprises a ceramic material.

13) The article of claim **12**, wherein the ceramic material is a thermal barrier (TBC) coating.

14) The article of claim **11**, wherein the coating is a coating system comprising a ceramic TBC over a metallic coating; and the passage hole is formed through the coating system.

15) The article of claim **14**, wherein the chevron outlet is formed partially within the coating system and partially within the substrate below the coating system.

16) The article of claim **1**, wherein the substrate is a gas turbine engine wall.

17) The article of claim **1**, wherein each passage hole is formed by a technique selected from the group consisting of a water jet cutting process; an electro-discharge machining (EDM) process, a laser-drilling process, and combinations thereof.

18) The article of claim **17**, wherein each technique is carried out by directing a contacting device or a contacting medium to a pre-selected region of the substrate, wherein the device or medium is directed to the region in a single or repeated plunging motion, sweeping motion, or combination of plunging motions and sweeping motions.

19) A film-cooled airfoil or airfoil region configured with one or more chevron film cooling holes, wherein the airfoil or airfoil region comprises

a) at least one inner surface exposed to a first fluid; and including an inlet;

b) an outer surface spaced from the said inner surface, and exposed to a hotter second fluid;

c) at least one row or other pattern of passage holes, wherein each passage hole includes an inlet bore extending partially through the substrate from the inner surface to a passage hole-exit proximate to the outer surface, with the inlet bore terminating in a chevron outlet adjacent the hole-exit, said chevron outlet comprising a pair of wing troughs having a common surface region between them;

wherein the common surface region comprises a valley which is adjacent the hole-exit; and a plateau adjacent the valley.

20) The airfoil or airfoil region of claim **19**, characterized by a structure which permits combustion gases to function as the second fluid; and film-cooling gasses to function as the first fluid, wherein the first fluid travels through the passage hole from the inner surface to the outer surface; and wherein the structure provides minimum separation of the first fluid from the outer surface of the airfoil, in a region generally adjacent the chevron outlet at the outer surface.

21) A method for the formation of a row or other pattern of passage holes in a substrate which includes an inner surface and an outer surface spaced from the inner suface, and further comprises an inlet bore extending at least partially between the two surfaces, said inlet bore terminating in a chevron outlet adjacent a hole-exit proximate to the outer surface, wherein the chevron outlet comprises a pair of wing troughs having a common surface region between them, said common surface region comprising a valley adjacent the hole-exit, and a plateau adjacent the valley,

wherein said method comprises forming each inlet bore and chevron outlet by directing a contacting device or a contacting medium to a pre-selected region of the substrate, in a computer-controlled single- or repeated plunging motion, sweeping motion, or combined plunging-and-sweeping motion.

22) The method of claim **21**, wherein the contacting device comprises a wire electrode which is operatively connected to and guided by an electro-discharge machining (EDM) device.

23) The method of claim **21**, wherein the contacting medium comprises water from a water jet cutting device.

24) The method of claim **21**, wherein the contacting medium comprises a laser beam from a laser drilling apparatus.

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